

Application Serial No. 10/552,311
Filing Date: October 7, 2005
Docket: 294-229 PCT/US
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REMARKS

In the office action dated December 12, 2007, the examiner rejected claims 1-3, 5-8, and 10 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,357,223 to Caren, et al. Additionally, the examiner rejected claims 1-13 under 35 U.S.C. 103(a) as being obvious over the Caren, et al. reference.

Prior to the present amendment, claims 1-13 were pending. By this amendment, applicants have amended claim 1 and added new claim 14. Accordingly, claims 1-14 are under examination.

Support for the amendment to claim 1 and new claim 14 can be found in the specification as filed at page 1, lines 3-6; page 3, lines 24-28; and page 4, lines 18-20. Accordingly, no new matter has been added by the amendments to the claims.

35 U.S.C. 102 REJECTION

Claims 1-3, 5-8, and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,357,223 to Caren, et al. According to the examiner, Caren, et al. disclose a method and an apparatus for the reduction of the amount of pollutants, such as carbon monoxide, hydrocarbons, and oxides of nitrogen, in the exhaust gas stream produced by the high temperature combustion of fuel. The examiner alleges that the corona discharge disclosed by Caren, et al. is the same as the "plasma" claimed in the present invention, and that since the corona discharge device is mounted within the catalytic converter, the whole off-gas stream is being treated.

In the present response, applicants have amended claim 1 to add the feature "wherein said off-gas stream is produced by combustion of natural gas in a natural gas engine for combined heat and power generation." The claims as presently written can be distinguished from Caren, et al., because Caren, et al. do not support the application of their corona discharge device for use in any other specific type of engine other than an automobile engine.

The examiner did point out in the office action that Caren, et al., at col. 11, lines 53-62, state the exhaust gases are from the combustion of a fuel, not just gases from automobile

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engines. However, the statement in Caren, et al. is not enough to anticipate the application of plasma and a catalyst to gases produced from a natural gas engine for combined heat and power generation.

It is well settled that in order to anticipate, a reference must teach every aspect of the claimed invention. Accordingly, the claims are not anticipated by Caren, et al. Applicants respectfully requests that the rejection of claims 1-3, 5-8, and 10 under 35 U.S.C. 102(b) be reconsidered and withdrawn.

35 U.S.C. 103 REJECTION

Claims 1-13 were rejected under 35 U.S.C. 103(a) as being obvious over the Caren, et al. '223 reference. The examiner states that it would have been obvious to treat a portion or the entire exhaust gas stream produced by the high temperature combustion of fuel to reduce the level of pollutants such as CO, HC, and NOx. Specifically, the examiner states that an automobile is considered a gas engine which in turn is considered a gas-fired plant.

Applicants maintain that an automobile's exhaust system is non-analogous art to the present invention. Furthermore, it would not have been obvious for one of ordinary skill to use the disclosure in Caren, et al. to create the claimed plasma and catalyst system. In particular, the invention relates to purification of gases from a gas-fired plant. The gas-fired plants contemplated by the inventors are typically power plants which operate on a significantly larger scale than automobiles. Due to the difference in scale, one in the art would not have been motivated to apply a catalytic converter to a power plant, much less a plasma and catalyst to a combined heat and power generation plant.

Accordingly, applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection.

NEW CLAIM

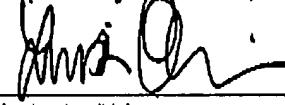
Applicants have added new independent claim 14 directed to a method of reducing the methane content in off-gases. Applicants believe claim 14 is allowable and respectfully request favorable consideration.

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Applicants respectfully submit that the application is now in proper form for allowance, which action is earnestly solicited. If resolution of any remaining issue is required prior to allowance of the application, it is respectfully requested that the examiner contact applicants' attorney at the telephone number provided below.

If any additional fees are due or any overpayment has been made in connection with this paper, please charge or credit Deposit Account No. 08-2461 for such sum.

Respectfully submitted,



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